

Work Order ID 84989

May-31-12 9:13:03 AM

84989

Page 1

Item ID: D2571

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Saddle, Fwd Out 205

Start Date: 30/05/2012 Start Qty: 12.00

12

Cust Item ID:

Required Date: 08/06/2012 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: ML5 Date: 12/05/13 Tooling:

Date:

Run Start ***NR1***

QC: Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D2571	Rev E
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100

0.00

100

HAAS CNC VERTICAL MACHINING #1

2A 12-7-30120

HAAS I

Memo

0.00

HAAS CNC vertical machine #1

Program Batch No. 84989 Double check by: SL 1-Machine Step No 1
per Folio FA051 and inspect per attached Dimension Sheets2-Machine Step
No 2 per Folio FA051 and inspect per attached Dimension Sheets3-Machine
Step No 3 per Folio FA051 and inspectSL 12-07-31

110

0.00

110

CONVENTIONAL MILLING MACHINE

2A 12-7-30120

Mill Conv

Memo

0.00

Conventional Milling Machine

Machine keyway as per dwg D2571 & D2572

SL 12-07-31

120

0.00

120

QC2- Inspect parts off machine FAI/FAIB

2A 12-7-30120

QC

Memo

0.00

Quality Control

SL 12-07-31

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 84989

84989

Page 2

May-31-12 9:13:03 AM

Item ID: D2571

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Saddle, Fwd Out 205

Start Date: 30/05/2012 Start Qty: 12.00

12

Cust Item ID:

Required Date: 08/06/2012 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00

130

D. 12/08/02

12 0

QC

Memo

0.00

Quality Control

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

12 2 20 12/08/03

HandFinish

Memo

0.00

Hand Finishing

150

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

150

12 2 20 12/08/07

Powdercoat

Memo

0.00

Powder Coating

START TIME: 8h00 320°F OVEN TEMPERATURE:

8h30 FINISH TIME:

m121841 ✓

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Work Order ID 84989

84989

Page 3

May-31-12 9:13:03 AM

Item ID: D2571

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Saddle, Fwd Out 205

Start Date: 30/05/2012 Start Qty: 12.00

12

Cust Item ID:

Required Date: 08/06/2012 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start *NR1*

QC: Date: SPC (Y/N): Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00							
160									
QC	Memo	0.00							
Quality Control									
170	Identify as per dwg & Stock Location: ST44/	0.00							
170									
Packaging	Memo	0.00							
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.00							
Quality Control									

bx 6 12/10/07

bx 12-8-7

12/8/7 12/12/08/07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

May-31-12 9:13:06 AM

Page 1

Work Order ID: 84989

84989

Parent Item: D2571

D2571

Parent Item Name: Saddle, Fwd Out 205

Start Date: 30/05/2012

Required Date: 08/06/2012

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP: 102.10.02Re-format; Change to Dwg Rev. D & incorporated
D2572KJ

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-007		Manufactured	No			100	Each	17.0000	1	12			
D6101-007									**				
Saddle Billet													

Location

Loc Qty

Loc Code

MAT041

16

83450

16

MAT042

1

79875

1

87630

12

24 12.7.30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order: 24989
Description: Saddle, Fwd Outboard	Part Number: D2571
Inspection Dwg: D2571 Rev. E	Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	1	2	3	4		
A	0.438	0.443		.438	.438	.438	.438		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.003	8.003	8.003	8.003		
F	0.490	0.510		.502	.502	.502	.502		
G	0.257	0.262		.258	.258	.258	.258		
H	0.375	0.380		.376	.376	.376	.376		
I	0.490	0.510		.500	.500	.500	.500		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.565	.565	.565	.565		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.490	1.500		1.495	1.495	1.495	1.495		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	3.869	3.879		3.874	3.874	3.874	3.874		
P	0.115	0.135		.128	.128	.128	.128		
Q	0.115	0.135		.135	.135	.135	.135		
R	0.240	0.260		.255	.255	.255	.255		
S	0.115	0.135		.131	.131	.131	.131		
T	0.178	0.198		.188	.188	.188	.188		
U	2.940	2.980		2.960	2.960	2.960	2.960		
V	0.230	0.250		.243	.243	.243	.243		
W	0.115	0.135		.121	.121	.121	.121		
X	0.308	0.313		.310	.310	.310	.310		
Y	0.760	0.765		.763	.763	.763	.763		
Z	0.352	0.372		.362	.362	.362	.362		
AA	0.470	0.530		.50	.50	.50	.50		
AB	0.615	0.635		.630	.630	.630	.630		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.260	.260	.260	.260		
AE	1.375	1.395		1.388	1.388	1.388	1.388		
AF	0.115	0.135		.135	.135	.135	.135		
AG	0.240	0.280		.280	.280	.280	.280		
AH	0.240	0.260		.252	.252	.252	.252		
AI	2.000	2.020		2.003	2.003	2.003	2.003		
AJ	0.023	0.043		.033	.033	.033	.033		
Accept/Reject									

Measured by: 2P
Date: 12.7.30

Audited by: B.A
Date: 12/08/02

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	24989
Description: Saddle, Fwd Outboard	Part Number:	D2571
Inspection Dwg: D2571 Rev. E		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	15	26	34	48		
A	0.438	0.443		.438	.438	.438	.438		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.50	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.001	8.001	8.001	8.000		
F	0.490	0.510		.502	.502	.500	.501		
G	0.257	0.262		.258	.258	.258	.258		
H	0.375	0.380		.376	.376	.376	.376		
I	0.490	0.510		.500	.502	.501	.500		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.568	.568	.568	.568		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.490	1.500		1.495	1.495	1.495	1.495		
N	2.495	2.505		2.501	2.500	2.500	2.500		
O	3.869	3.879		3.874	3.874	3.874	3.874		
P	0.115	0.135		.125	.125	.125	.125		
Q	0.115	0.135		.135	.125	.125	.135		
R	0.240	0.260		.254	.254	.254	.255		
S	0.115	0.135		.126	.125	.126	.126		
T	0.178	0.198		.188	.188	.188	.188		
U	2.940	2.980		2.960	2.960	2.960	2.960		
V	0.230	0.250		.242	.242	.242	.243		
W	0.115	0.135		.122	.123	.122	.122		
X	0.308	0.313		.310	.310	.310	.310		
Y	0.760	0.765		.763	.767	.767	.763		
Z	0.352	0.372		.362	.360	.360	.361		
AA	0.470	0.530		.50	.50	.50	.50		
AB	0.615	0.635		.670	.670	.670	.670		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.245	.245	.245	.245		
AE	1.375	1.395		1.388	1.388	1.388	1.388		
AF	0.115	0.135		.135	.125	.135	.135		
AG	0.240	0.280		.250	.250	.250	.250		
AH	0.240	0.260		.251	.252	.251	.252		
AI	2.000	2.020		2.003	2.003	2.003	2.003		
AJ	0.023	0.043		.033	.033	.033	.033		
Accept/Reject									

Measured by:	2P / SL
Date:	12-07-21

Audited by:	K.A
Date:	12/08/02

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	84989
Description: Saddle, Fwd Outboard	Part Number:	D2571
Inspection Dwg: D2571 Rev. E	Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				A ₉	A ₁₀	A ₁₁	A ₁₂		
A	0.438	0.443		.438	.438	.438	.438		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.505	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.000	8.000	8.005	8.000		
F	0.490	0.510		.501	.500	.507	.502		
G	0.257	0.262		.258	.258	.258	.258		
H	0.375	0.380		.376	.376	.376	.376		
I	0.490	0.510		.502	.500	.500	.500		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.569	.568	.567	.567		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.490	1.500		1.495	1.495	1.495	1.495		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	3.869	3.879		3.874	3.874	3.874	3.874		
P	0.115	0.135		.125	.125	.125	.125		
Q	0.115	0.135		.135	.135	.135	.135		
R	0.240	0.260		.254	.254	.255	.254		
S	0.115	0.135		.126	.126	.127	.126		
T	0.178	0.198		.188	.188	.188	.188		
U	2.940	2.980		2.960	2.960	2.960	2.960		
V	0.230	0.250		.243	.243	.243	.243		
W	0.115	0.135		.121	.123	.121	.122		
X	0.308	0.313		.310	.309	.310	.310		
Y	0.760	0.765		.763	.763	.763	.763		
Z	0.352	0.372		.361	.361	.361	.361		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.629	.629	.629	.629		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.251	.252	.252	.250		
AE	1.375	1.395		1.389	1.388	1.389	1.389		
AF	0.115	0.135		.135	.135	.135	.135		
AG	0.240	0.280		.260	.260	.260	.260		
AH	0.240	0.260		.252	.252	.252	.252		
AI	2.000	2.020		2.001	2.002	2.003	2.003		
AJ	0.023	0.043		.033	.033	.033	.033		
Accept/Reject									

Measured by:	SL
Date:	12-07-31

Audited by:	B.A
Date:	12/08/02

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____






Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

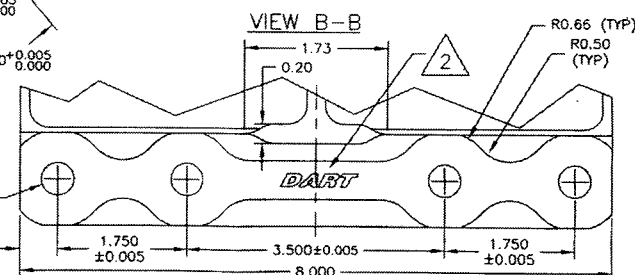
NOTE: Date & initial all entries


05.12.06

MATERIAL: 7075-T7351 (QQ-A-250/12) (REF DART SPEC. 06102-001)
FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER DART
QSI 005 4.3
BREAK ALL SHARP EDGES 0.010 TO 0.020
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- | | |
|---|--|
|  | ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX DEPTH OF 0.010 |
|  | ENGRAVE DART LOGO TO MAX DEPTH OF 0.015 WITH MIN RAD 0.125 |
|  | CHAMFER 0.063" x 45° AROUND THIS SURFACE (TYPICAL 2 PLACES) |
|  | CHAMFER 0.063" x 45° ALL AROUND |
|  | CHAMFER 0.033" x 45° (SEE DETAIL C) |

$\triangle E$



E	05.07.13	ADD CHAMFER ON RIDGE, NOTE 5
D	02.09.06	ADD RIDGES; TIGHTEN TOLERANCES
C	99.10.22	INCORP. DEO 9123/9079/9102 ADD DIMENSIONS PER TSR A1177
B	96.12.02	ADD GRAIN DIR., 0.438 WAS 0.425
A	96.09.16	NEW ISSUE
DESIGN DS		DRAWN BY PH
		DART AEROSPACE LTD. HAMPSHIRE, ONTARIO, CANADA
CHECKED #	APPROVED #	DRAWING NO. D2571
DATE 05.07.13		TITLE OUTER FWD SADDLE
		REV. E SHEET 1 OF 1 SCALE 2:1

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DART AEROSPACE LTD.

DART DART AEROSPACE LTD.
MISSISSAUGA, ONTARIO, CANADA

DRAWING NO.	REV. E
02571	SHEET 1 OF 1

TITLE	SCALE
OUTER FWD SADDLE	2:1

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 24989 ML

ER
9 MLJ
12/05/31

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries